

## ABSTRACT

A linearly polarized light output unit (701) outputs a linearly polarized light. A first phase modulation unit (703) includes a first polarization axis and modulates a 5 phase of the linearly polarized light. A second phase modulation unit (704) includes a second polarization axis orthogonal to the first polarization axis and modulates the phase of the linearly polarized light. A signal supply unit (705) supplies a modulation signal ( $v_b$ ) for modulating 10 the phase of the linearly polarized light to one of the phase modulation units. The signal supply unit (705) also supplies a bias signal ( $V_o$ ) to a phase modulation unit (702). A light intensity detection unit (707) detects an 15 intensity of a light emitted from the phase modulation unit (702), to which the signal is supplied, to a sample (106) that contains an optically active material by causing a polarization plane of the light to be rotated and the light to be transmitted by the sample (106). An optical rotation angle calculation unit (708) calculates an optical rotation 20 angle by the sample (106) based on the modulation signal ( $V_b$ ) and the detected light intensity.